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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KRAUSE, JUSTIN MITCHELL

ART UNIT	PAPER NUMBER
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3656

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,690	Applicant(s) BAR ET AL.	
	Examiner JUSTIN KRAUSE	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-23 and 26 is/are rejected.
- 7) ☒ Claim(s) 24-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities: Claim 12 depends from cancelled claim 1. On June 9, 2009, a phone call was received from Phil Reddick, applicant's representative, who indicated that claim 12 should depend from claim 8. For purposes of this Office Action, claim 12 is considered dependant from claim 8.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 17, the scope of the phrase, "clear of the wings" is indefinite. It is unclear what the phrase is intended to mean.

Regarding claim 18, the scope of the phrase, "preloaded within the housing portion at assembly" is unclear because the meaning of "at assembly" cannot be determined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (US Patent 3,370,477).

Lewis discloses a transmission comprising:

A moveable shift fork (18),

A shaft (20) having a finger (70) radially outwardly extending therefrom,

A sleeve (58) supported on the shaft and restricted from rotation (rotation is restricted by the fork being engaged with the clutch structure 14), the sleeve including a groove (62) in receipt of the finger such that rotation of the shaft causes axial translation of the sleeve, and a spring accumulator (22) acted upon by the sleeve to transfer a load to the shift fork.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Smith (US Patent 6,619,153).

Lewis does not disclose the shift fork including an integrally formed housing in receipt of the sleeve and spring accumulator.

Smith teaches a shift fork (94) with an integrally formed housing (100) which receives a sleeve (152) and spring accumulator (150) for the purpose of permitting a shift to occur in the event of a resistance force from the transmission torque (col. 1, lines 52-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a shift fork with an integrally formed housing in receipt of the sleeve and spring accumulator for the desired purpose of permitting a shift to occur in the event of a resistance force as taught by Smith.

Regarding claim 10, the spring accumulator of Smith includes a holding yoke (96) restricted from rotating relative to the housing.

Regarding claim 11, the sleeve is restricted from rotating relative to the holding yoke (the friction force between the sleeve ends and holding yoke restricts relative rotation).

Regarding claim 12, the spring accumulator includes a compression spring (Smith 150) having opposite ends in engagement with the holding yoke (at 136, 142).

Regarding claim 13, opposite ends of the spring also engage portions of the housing (114b, 116b).

Regarding claim 14, the holding yoke is fixed for axial movement with the sleeve (the sleeve is axially restricted within the holding yoke, and therefore the sleeve and holding yoke move together).

Regarding claim 15, the holding yoke includes substantially parallel spaced apart wings (136, 142) each having an aperture (136a, 142a, an aperture is interpreted as an opening, and is not considered to require a complete circular bore to satisfy the limitation) in receipt of the sleeve.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis as applied to claim 8 above, further in view of Baasch (US 2002/0062706).

Lewis does not disclose a motor selectively driving the shaft.

Baasch teaches a motor (9,10) selectively driving a shaft (3) for the purpose of actuating a shifting device (6, 4a).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a motor to selectively drive the shaft for the desired purpose of actuating a shifting device as taught by Baasch.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (US Patent 3,370,477) in view of Smith (US Patent 6,619,153).

Lewis discloses a transmission comprising:

An axially translatable shift member (18) and a bifurcated shift fork portion (see fig 1, engaged with clutch structure 14) adapted to engage a rotatable shifting element (14), a rotatable shaft (20), a radially extending finger (70), a sleeve (58) including a gate (62) in receipt of the finger, wherein the sleeve surrounds the shaft and rotation of the shaft axially translates the sleeve, and spring (22).

Lewis does not disclose a housing, the spring surrounding the sleeve, or a holding yoke fixed to the sleeve to restrict rotation of the sleeve relative to the housing portion, the holding yoke having a pair of spaced apart wings, the spring being positioned between the wings and in engagement with the wings, the spring including portions clear of the wings.

Smith teaches a transmission which includes a housing (100), a spring (150) encompassing a sleeve (152), and a holding yoke (96) fixed to the sleeve to restrict rotation of the sleeve relative to the housing (100) (via friction between the holding yoke and ends of sleeve), the holding yoke having a pair of spaced apart wings (136, 142), the spring being positioned between and in engagement with the wings, the spring including portions clear of the wings (the wings only extend over half of the spring's diameter) and engagement with the housing portion (114b, 116b) for the purpose of permitting a shift to occur in the event of a resistance force from the transmission torque (col. 1, lines 52-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a housing, a spring surrounding the

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sleeve, and a holding yoke fixed to the sleeve to restrict rotation of the sleeve relative to the housing portion, the holding yoke having a pair of spaced apart wings, the spring being positioned between the wings and in engagement with the wings, the spring including portions clear of the wings for the desired purpose of permitting a shift to occur in the event of a resistance force as taught by Smith.

Regarding claim 18, the spring is preloaded within the housing portion (Smith, col. 4, line 41). ("At assembly" is assumed to mean during the assembly process. Smith discloses preloading the spring during the assembly process.)

Regarding claim 19, Smith discloses a shaft (70) which extends through each of the sleeve, spring, holding yoke and housing portion (Col. 4, lines 19 and 36-40).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Smith as applied to claim 19 above, further in view of Reinhardt et al (US Patent 4,070,914) and Baasch et al (US 2002/0062706).

Lewis does not disclose the shaft to be tubular, the finger transversely extending through the shaft and a roller coupled to the finger positioned in the groove.

Reinhardt teaches a tubular shaft (21) and a finger (16) transversely extending through the shaft for the purpose of accommodating actuation means for the finger within the shaft. While Reinhardt does not disclose a roller, Reinhardt teaches the use of a rounded end on the finger for the purpose of easing engagement of the finger.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a hollow shaft and a finger extending

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transversely through the shaft for the desired purpose of accommodating actuation means for the finger as taught by Reinhardt.

Baasch teaches the use of a roller (6) engaging a groove (4a) for the purpose of reducing friction within the shifting device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a roller on the finger engaging the groove for the desired purpose of reducing friction within the shifting device as taught by Baasch.

Claims 21-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Smith.

Lewis discloses a moveable shift fork (engaged with clutch structure 14),

A sleeve (58) including a gate (62),

A rotatable shaft (20) including a radially extending finger (70) being positioned within the gate such that rotation of the shaft axially translates the sleeve.

Lewis does not disclose a housing, a holding yoke being fixedly connected to the sleeve and being guided by the housing, the holding yoke including spaced apart wings, and a spring surrounding the sleeve and being positioned between the wings, the spring transferring a load between the housing and the sleeve.

Smith teaches a shift fork with an integral housing (100), a holding yoke (96) being fixedly connected to a sleeve (152) (one assembled the sleeve is fixed relative to the holding yoke by the wings 136 and 142 and by the friction due to the preloaded

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spring 150) and being guided by the housing (by 108 and 106), the holding yoke including spaced apart wings (136, 142), and a spring (150) surrounding the sleeve and being positioned between the wings, the spring transferring a load between the housing and the sleeve for the purpose of permitting a shift to occur in the event of a resistance force from the transmission torque (col. 1, lines 52-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a housing, a holding yoke being fixedly connected to the sleeve and being guided by the housing, the holding yoke including spaced apart wings, and a spring surrounding the sleeve and being positioned between the wings, the spring transferring a load between the housing and the sleeve for the desired purpose of permitting a shift to occur in the event of a resistance force as taught by Smith.

Regarding claim 22, the spring projects beyond the wings and cooperates with steps (114, 116) in the housing.

Regarding claim 23, the spring is pre-stressed (Smith, col. 4, line 41).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Smith as applied to claim 21 above, and further in view of Baasch.

Lewis does not disclose the finger having a rotatably journaled roller at its end cooperating with the gate.

Baasch teaches a shift device with a rotatably journaled roller (6) which cooperates with a gate (4a) for the purpose of reducing friction in the shift device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis to include a rotatably journaled roller at the end of the finger cooperating with the gate for the desired purpose of reducing friction as taught by Baasch.

Allowable Subject Matter

Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

The Office Action dated January 22, 2009 indicated claim 4 as allowable. Applicant's remarks regard claim 21 to include the positively recited elements of claim 4 and intervening claims. Claim 21 differs in scope from claim 4 which was previously indicated allowable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN KRAUSE whose telephone number is (571)272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin Krause/
Examiner, Art Unit 3656